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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,545	04/12/2004	Michael D. Landon	11897.16	1802

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EXAMINER	
BLAIR, KILE O	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/822,545	LANDON ET AL.	
	Examiner	Art Unit	
	Kile O. Blair	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the communication filed on 12/23/08. Claims 1-19 are pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 9, and 10 recite the limitation "said at least one period of time". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Munson et al. (US Pat. No. 3,934,084, hereinafter as Munson).

Regarding claim 1, Munson teaches a temporal volume control device comprising: a monitoring component comprising a processing element that creates a

temporal ambient noise map (microphone 4 which measures the sound level present and the output level is stored in store 7, col. 2, lines 5-29), said temporal ambient noise map comprising a plurality of predetermined average ambient noise values corresponding to a plurality of discrete time periods (at predetermined intervals, the timer mutes the input signal for a sampling period, col. 3, lines 34-37), said noise values being collected before audio output adjustment operation is begun (the background noise value is obtained during quiet periods and then stored before it used to control the gain of amplifier 8 during periods of speech and music, col. 2, lines 29-44); and

an audio output component for receiving information corresponding to said temporal ambient noise map and producing an audio volume level substantially corresponding to and greater than said temporal ambient noise map (variable gain amplifier 8 provides compensation for changes in the level of the ambient background noise so that the music or speech amplification is increased in noisy backgrounds and is decreased in quiet backgrounds, col. 3, lines 7-12).

Regarding claim 2, Munson teaches the temporal volume control device of claim 1, wherein said audio output component utilizes said temporal ambient noise map to predict future ambient noise values (the gain of amplifier is controlled according to the level stored in store, col. 2, lines 38-44; therefore the gain of the amplifier is controlled by past values and therefore the noise level on which the speech or music input signal amplification is based on is a predicted noise level).

Regarding claim 3, Munson teaches the temporal volume control device of claim 1, wherein a difference between said audio volume level and said temporal ambient

noise map is constant over time (an increase or decrease in the ambient noise will result in a proportional change in the amplifier gain, col. 3, lines 17-22).

Regarding claim 4, Munson teaches the temporal volume control device of claim 1, wherein said audio output component further comprises a manual volume control to selectively override said audio volume level (an operator manually increasing the amplitude for announcements of particular importance, col. 2, lines 60-67).

Regarding claim 5, Munson teaches the temporal volume control device of claim 1, wherein said at least one period of time comprises twenty-four hours (reducing sound output at night, col. 2, lines 60-67).

Regarding claim 6, Munson teaches the temporal volume control device of claim 1, further comprising an ambient noise monitoring component for iteratively recording at least one ambient noise value corresponding to a time value for at least one period of time to create said temporal ambient noise map (at predetermined intervals, the timer mutes the input signal for a sampling period, col. 3, lines 34-37; microphone 4 measures the sound level present and the output level is stored in store 7, col. 2, lines 5-29).

Regarding claim 7, Munson teaches the temporal volume control device of claim 6, wherein said ambient noise monitoring component operates independently of said audio output component (the output signal of the detector is passed to a store 7 only during quiet periods, i.e. when the audio output component is not significantly contributing any sound to the ambient noise level, col. 1, lines 56-66 and col. 2, lines 21-29).

Regarding claim 8, Munson teaches the temporal volume control device of claim 6, wherein said ambient noise monitoring component is integral to said audio output component (the gain of amplifier 8 is controlled according to the level stored in store 7 which is obtained from the microphone 4, col. 2, lines 42-44).

Regarding claim 9, Munson teaches the temporal volume control device of claim 6, wherein said ambient noise monitoring component further averages said at least one ambient noise value corresponding to said time value over said at least one period of time to obtain an average ambient noise value corresponding to said time value (sampling period, col. 3, lines 34-37).

Regarding claim 10, Munson teaches the temporal volume control device of claim 9, wherein said temporal ambient noise map comprises said average ambient noise values corresponding to said time values over said period of time (noise samples taken during sampling period correspond to the time values of the sampling period, col. 3, lines 34-37).

Regarding claim 11, Munson teaches a method for controlling audio output volume, said method comprising:

monitoring levels of ambient noise over at least one period of time (noise samples taken during sampling periods at intervals during a business day at a shop, col. 3, line 23- col. 4, line 4);

averaging said levels of ambient noise to create a predetermined temporal ambient noise map (a certain level of ambient noise is derived from measurements taken during sampling period, col. 2, lines 29-37 and col. 3, lines 34-37), said temporal ambient noise

map comprising a plurality of average ambient noise values corresponding to a plurality of discrete time periods (sampled noise values correspond to each sampling period, col. 3, lines 34-37), said noise values being

collected before audio output adjustment operation is begun (the background noise value is obtained during quiet periods and then stored before it used to control the gain of amplifier 8 during periods of speech and music, col. 2, lines 29-44);

communicating said temporal ambient noise map to an audio output device, said audio output device capable of automatically adjusting an audio output volume level to substantially correspond to said temporal ambient noise map; and

producing, via said audio output device, audio information according to said audio output volume level (variable gain amplifier 8 provides compensation for changes in the level of the ambient background noise so that the music or speech amplification is increased in noisy backgrounds and is decreased in quiet backgrounds, col. 3, lines 7-12).

Regarding claim 12, Munson teaches the method of claim 11, wherein said monitoring further comprises correlating at least one ambient noise value with at least one time value over said at least one period of time (when the detector operates with a time constant, the noise levels are correlated with a time value during the sampling period, col. 2, lines 29-37).

Regarding claim 13, Munson teaches the method of claim 12, wherein said averaging further comprises determining an average ambient noise value corresponding

to said at least one time value over said at least one period of time (sampling period, col. 3, lines 34-37).

Regarding claim 14, Munson teaches the method of claim 11, further comprising maintaining said audio output volume level at a level greater than levels corresponding to said temporal ambient noise map (variable gain amplifier 8 provides compensation for changes in the level of the ambient background noise so that the music or speech amplification is increased in noisy backgrounds and is decreased in quiet backgrounds, col. 3, lines 7-12).

Regarding claim 15, Munson teaches the method of claim 14, wherein a difference between said audio output volume level and said levels corresponding to said temporal ambient noise map is constant over time (an increase or decrease in the ambient noise will result in a proportional change in the amplifier gain, col. 3, lines 17-22).

Regarding claim 16, Munson teaches the method of claim 11, further comprising selectively overriding, via a manual volume control, said audio output volume level (an operator manually increasing the amplitude for announcements of particular importance, col. 2, lines 60-67).

Regarding claim 17, Munson teaches the method of claim 11, wherein said at least one period of time comprises twenty-four hours (reducing sound output at night, col. 2, lines 60-67).

Regarding claim 18, Munson teaches a computer program product for implementing within a computer system a method for controlling audio output volume

(computer techniques to control the gain, col. 2, line 67- col. 3, line 6), said computer program product comprising: a computer readable medium for providing computer program code means utilized to implement the method, wherein the computer program code means is comprised of executable code (computer techniques, col. 2, lines 67-68) for implementing the steps for: creating a predetermined temporal ambient noise map (microphone 4 which measures the sound level present and the output level is stored in store 7, col. 2, lines 5-29), said temporal ambient noise map comprising a plurality of average ambient noise values corresponding to a plurality of discrete time periods (at predetermined intervals, the timer mutes the input signal for a sampling period, col. 3, lines 34-37), said noise values being collected before audio output adjustment operation is begun (the background noise value is obtained during quiet periods and then stored before it used to control the gain of amplifier 8 during periods of speech and music, col. 2, lines 29-44); and producing audio output substantially corresponding to and greater than said temporal ambient noise map (variable gain amplifier 8 provides compensation for changes in the level of the ambient background noise so that the music or speech amplification is increased in noisy backgrounds and is decreased in quiet backgrounds, col. 3, lines 7-12).

Regarding claim 19, Munson teaches the computer program product of claim 18, wherein said computer program code further comprises executable code for implementing the steps for: monitoring levels of ambient noise over at least one period of time (noise samples taken during sampling periods at intervals during a business day at a shop, col. 3, line 23- col. 4, line 4); and averaging said levels of ambient noise to

create said temporal ambient noise map (a certain level of ambient noise is derived from measurements taken during sampling period, col. 2, lines 29-37 and col. 3, lines 34-37).

Response to Arguments

Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Olson (US Pat. No. 2,457,712) teaches an apparatus for controlling an audio output volume in response to a measured ambient noise.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kile O. Blair whose telephone number is (571) 270-3544. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (571) 272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2614